IFWO

RAW SEQUENCE LISTING

PATENT APPLICATION: **US/10/697,912**

DATE: 09/16/2004
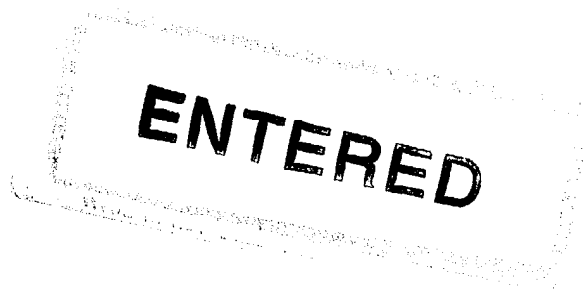
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Output Set: **N:\CRF4\09162004\J697912.raw**

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 1 <110> APPLICANT: SADHU, Chanchal et al.
 2 <120> TITLE OF INVENTION: INHIBITORS OF HUMAN PHOSPHATIDYLINOSITOL 3-KINASE DELTA
 3 <130> FILE REFERENCE: 27866/36170C
 4 <140> CURRENT APPLICATION NUMBER: US/10/697,912
 5 <141> CURRENT FILING DATE: 2003-10-30
 6 <150> PRIOR APPLICATION NUMBER: US/10/027,591
 7 <151> PRIOR FILING DATE: 2001-10-19
 8 <150> PRIOR APPLICATION NUMBER: 09/841,341
 9 <151> PRIOR FILING DATE: 2001-04-24
10 <150> PRIOR APPLICATION NUMBER: 60/199,655
11 <151> PRIOR FILING DATE: 2000-04-25
12 <150> PRIOR APPLICATION NUMBER: 60/238,057
13 <151> PRIOR FILING DATE: 2000-10-25
14 <160> NUMBER OF SEQ ID NOS: 6
15 <170> SOFTWARE: PatentIn version 3.0
17 <210> SEQ ID NO: 1
18 <211> LENGTH: 5220
19 <212> TYPE: DNA
20 <213> ORGANISM: Human p110delta complete cDNA
21 <220> FEATURE:
22 <221> NAME/KEY: CDS
23 <222> LOCATION: (196)..(3327)
24 <400> SEQUENCE: 1
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26     aaggagtcag gccagggcgg gatgacactc attgattcta aagcatcttt aatctgccag     120
27     gcggagggg ctttgctggt ctttcttgga ctattccaga gaggacaact gtcatctggg     180
28     aagtaacaac gcagg atg ccc cct ggg gtg gac tgc ccc atg gaa ttc tgg      231
29                     Met Pro Pro Gly Val Asp Cys Pro Met Glu Phe Trp
30                      1               5                  10
31     acc aag gag gag aat cag agc gtt gtg gtt gac ttc ctg ctg ccc aca      279
32     Thr Lys Glu Glu Asn Gln Ser Val Val Val Asp Phe Leu Leu Pro Thr
33              15                  20                  25
34     ggg gtc tac ctg aac ttc cct gtg tcc cgc aat gcc aac ctc agc acc      327
35     Gly Val Tyr Leu Asn Phe Pro Val Ser Arg Asn Ala Asn Leu Ser Thr
36          30                  35                  40
37     atc aag cag ctg ctg tgg cac cgc gcc cag tat gag ccg ctc ttc cac      375
38     Ile Lys Gln Leu Leu Trp His Arg Ala Gln Tyr Glu Pro Leu Phe His
39     45                  50                  55                  60
40     atg ctc agt ggc ccc gag gcc tat gtg ttc acc tgc atc aac cag aca      423
41     Met Leu Ser Gly Pro Glu Ala Tyr Val Phe Thr Cys Ile Asn Gln Thr
42                      65                  70                  75
43     gcg gag cag caa gag ctg gag gac gag caa cgg cgt ctg tgt gac gtg      471
44     Ala Glu Gln Gln Glu Leu Glu Asp Glu Gln Arg Arg Leu Cys Asp Val
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45                 80                 85                 90
46   cag ccc ttc ctg ccc gtc ctg cgc ctg gtg gcc cgt gag ggc gac cgc     519
47   Gln Pro Phe Leu Pro Val Leu Arg Leu Val Ala Arg Glu Gly Asp Arg
48        95                 100                105
49   gtg aag aag ctc atc aac tca cag atc agc ctc ctc atc ggc aaa ggc     567
50   Val Lys Lys Leu Ile Asn Ser Gln Ile Ser Leu Leu Ile Gly Lys Gly
51        110                115                120
52   ctc cac gag ttt gac tcc ttg tgc gac cca gaa gtg aac gac ttt cgc     615
53   Leu His Glu Phe Asp Ser Leu Cys Asp Pro Glu Val Asn Asp Phe Arg
54   125                130                135                140
55   gcc aag atg tgc caa ttc tgc gag gag gcg gcc gcc cgc cgg cag cag     663
56   Ala Lys Met Cys Gln Phe Cys Glu Glu Ala Ala Ala Arg Arg Gln Gln
57                145                150                155
58   ctg ggc tgg gag gcc tgg ctg cag tac agt ttc ccc ctg cag ctg gag     711
59   Leu Gly Trp Glu Ala Trp Leu Gln Tyr Ser Phe Pro Leu Gln Leu Glu
60                160                165                170
61   ccc tcg gct caa acc tgg ggg cct ggt acc ctg cgg ctc ccg aac cgg     759
62   Pro Ser Ala Gln Thr Trp Gly Pro Gly Thr Leu Arg Leu Pro Asn Arg
63                175                180                185
64   gcc ctt ctg gtc aac gtt aag ttt gag ggc agc gag gag agc ttc acc     807
65   Ala Leu Leu Val Asn Val Lys Phe Glu Gly Ser Glu Glu Ser Phe Thr
66        190                195                200
67   ttc cag gtg tcc acc aag gac gtg ccg ctg gcg ctg atg gcc tgt gcc     855
68   Phe Gln Val Ser Thr Lys Asp Val Pro Leu Ala Leu Met Ala Cys Ala
69   205                210                215                220
70   ctg cgg aag aag gcc aca gtg ttc cgg cag ccg ctg gtg gag cag ccg     903
71   Leu Arg Lys Lys Ala Thr Val Phe Arg Gln Pro Leu Val Glu Gln Pro
72                225                230                235
73   gaa gac tac acg ctg cag gtg aac ggc agg cat gag tac ctg tat ggc     951
74   Glu Asp Tyr Thr Leu Gln Val Asn Gly Arg His Glu Tyr Leu Tyr Gly
75                240                245                250
76   aac tac ccg ctc tgc cag ttc cag tac atc tgc agc tgc ctg cac agt     999
77   Asn Tyr Pro Leu Cys Gln Phe Gln Tyr Ile Cys Ser Cys Leu His Ser
78                255                260                265
79   ggg ttg acc cct cac ctg acc atg gtc cat tcc tcc tcc atc ctc gcc    1047
80   Gly Leu Thr Pro His Leu Thr Met Val His Ser Ser Ser Ile Leu Ala
81        270                275                280
82   atg cgg gat gag cag agc aac cct gcc ccc cag gtc cag aaa ccg cgt    1095
83   Met Arg Asp Glu Gln Ser Asn Pro Ala Pro Gln Val Gln Lys Pro Arg
84   285                290                295                300
85   gcc aaa cca cct ccc att cct gcg aag aag cct tcc tct gtg tcc ctg    1143
86   Ala Lys Pro Pro Pro Ile Pro Ala Lys Lys Pro Ser Ser Val Ser Leu
87                305                310                315
88   tgg tcc ctg gag cag ccg ttc cgc atc gag ctc atc cag ggc agc aaa    1191
89   Trp Ser Leu Glu Gln Pro Phe Arg Ile Glu Leu Ile Gln Gly Ser Lys
90                320                325                330
91   gtg aac gcc gac gag cgg atg aag ctg gtg gtg cag gcc ggg ctt ttc    1239
92   Val Asn Ala Asp Glu Arg Met Lys Leu Val Val Gln Ala Gly Leu Phe
93        335                340                345
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 94     cac ggc aac gag atg ctg tgc aag acg gtg tcc agc tcg gag gtg agc     1287
 95     His Gly Asn Glu Met Leu Cys Lys Thr Val Ser Ser Ser Glu Val Ser
 96         350                 355                 360
 97     gtg tgc tcg gag ccc gtg tgg aag cag cgg ctg gag ttc gac atc aac     1335
 98     Val Cys Ser Glu Pro Val Trp Lys Gln Arg Leu Glu Phe Asp Ile Asn
 99     365                 370                 375                 380
100     atc tgc gac ctg ccc cgc atg gcc cgt ctc tgc ttt gcg ctg tac gcc     1383
101     Ile Cys Asp Leu Pro Arg Met Ala Arg Leu Cys Phe Ala Leu Tyr Ala
102                 385                 390                 395
103     gtg atc gag aaa gcc aag aag gct cgc tcc acc aag aag aag tcc aag     1431
104     Val Ile Glu Lys Ala Lys Lys Ala Arg Ser Thr Lys Lys Lys Ser Lys
105                 400                 405                 410
106     aag gcg gac tgc ccc att gcc tgg gcc aac ctc atg ctg ttt gac tac     1479
107     Lys Ala Asp Cys Pro Ile Ala Trp Ala Asn Leu Met Leu Phe Asp Tyr
108                 415                 420                 425
109     aag gac cag ctt aag acc ggg gaa cgc tgc ctc tac atg tgg ccc tcc     1527
110     Lys Asp Gln Leu Lys Thr Gly Glu Arg Cys Leu Tyr Met Trp Pro Ser
111                 430                 435                 440
112     gtc cca gat gag aag ggc gag ctg ctg aac ccc acg ggc act gtg cgc     1575
113     Val Pro Asp Glu Lys Gly Glu Leu Leu Asn Pro Thr Gly Thr Val Arg
114     445                 450                 455                 460
115     agt aac ccc aac acg gat agc gcc gct gcc ctg ctc atc tgc ctg ccc     1623
116     Ser Asn Pro Asn Thr Asp Ser Ala Ala Ala Leu Leu Ile Cys Leu Pro
117                 465                 470                 475
118     gag gtg gcc ccg cac ccc gtg tac tac ccc gcc ctg gag aag atc ttg     1671
119     Glu Val Ala Pro His Pro Val Tyr Tyr Pro Ala Leu Glu Lys Ile Leu
120                 480                 485                 490
121     gag ctg ggg cga cac agc gag tgt gtg cat gtc acc gag gag gag cag     1719
122     Glu Leu Gly Arg His Ser Glu Cys Val His Val Thr Glu Glu Glu Gln
123                 495                 500                 505
124     ctg cag ctg cgg gaa atc ctg gag cgg cgg ggg tct ggg gag ctg tat     1767
125     Leu Gln Leu Arg Glu Ile Leu Glu Arg Arg Gly Ser Gly Glu Leu Tyr
126                 510                 515                 520
127     gag cac gag aag gac ctg gtg tgg aag ctg cgg cat gaa gtc cag gag     1815
128     Glu His Glu Lys Asp Leu Val Trp Lys Leu Arg His Glu Val Gln Glu
129     525                 530                 535                 540
130     cac ttc ccg gag gcg cta gcc cgg ctg ctg ctg gtc acc aag tgg aac     1863
131     His Phe Pro Glu Ala Leu Ala Arg Leu Leu Leu Val Thr Lys Trp Asn
132                 545                 550                 555
133     aag cat gag gat gtg gcc cag atg ctc tac ctg ctg tgc tcc tgg ccg     1911
134     Lys His Glu Asp Val Ala Gln Met Leu Tyr Leu Leu Cys Ser Trp Pro
135                 560                 565                 570
136     gag ctg ccc gtc ctg agc gcc ctg gag ctg cta gac ttc agc ttc ccc     1959
137     Glu Leu Pro Val Leu Ser Ala Leu Glu Leu Leu Asp Phe Ser Phe Pro
138                 575                 580                 585
139     gat tgc cac gta ggc tcc ttc gcc atc aag tcg ctg cgg aaa ctg acg     2007
140     Asp Cys His Val Gly Ser Phe Ala Ile Lys Ser Leu Arg Lys Leu Thr
141                 590                 595                 600
142     gac gat gag ctg ttc cag tac ctg ctg cag ctg gtg cag gtg ctc aag     2055
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143    Asp Asp Glu Leu Phe Gln Tyr Leu Leu Gln Leu Val Gln Val Leu Lys
144    605                 610                 615                 620
145    tac gag tcc tac ctg gac tgc gag ctg acc aaa ttc ctg ctg gac cgg    2103
146    Tyr Glu Ser Tyr Leu Asp Cys Glu Leu Thr Lys Phe Leu Leu Asp Arg
147                    625                 630                 635
148    gcc ctg gcc aac cgc aag atc ggc cac ttc ctt ttc tgg cac ctc cgc    2151
149    Ala Leu Ala Asn Arg Lys Ile Gly His Phe Leu Phe Trp His Leu Arg
150                    640                 645                 650
151    tcc gag atg cac gtg ccg tcg gtg gcc ctg cgc ttc ggc ctc atc ctg    2199
152    Ser Glu Met His Val Pro Ser Val Ala Leu Arg Phe Gly Leu Ile Leu
153                    655                 660                 665
154    gag gcc tac tgc agg ggc agc acc cac cac atg aag gtg ctg atg aag    2247
155    Glu Ala Tyr Cys Arg Gly Ser Thr His His Met Lys Val Leu Met Lys
156                    670                 675                 680
157    cag ggg gaa gca ctg agc aaa ctg aag gcc ctg aat gac ttc gtc aag    2295
158    Gln Gly Glu Ala Leu Ser Lys Leu Lys Ala Leu Asn Asp Phe Val Lys
159    685                 690                 695                 700
160    ctg agc tct cag aag acc ccc aag ccc cag acc aag gag ctg atg cac    2343
161    Leu Ser Ser Gln Lys Thr Pro Lys Pro Gln Thr Lys Glu Leu Met His
162                    705                 710                 715
163    ttg tgc atg cgg cag gag gcc tac cta gag gcc ctc tcc cac ctg cag    2391
164    Leu Cys Met Arg Gln Glu Ala Tyr Leu Glu Ala Leu Ser His Leu Gln
165                    720                 725                 730
166    tcc cca ctc gac ccc agc acc ctg ctg gct gaa gtc tgc gtg gag cag    2439
167    Ser Pro Leu Asp Pro Ser Thr Leu Leu Ala Glu Val Cys Val Glu Gln
168                    735                 740                 745
169    tgc acc ttc atg gac tcc aag atg aag ccc ctg tgg atc atg tac agc    2487
170    Cys Thr Phe Met Asp Ser Lys Met Lys Pro Leu Trp Ile Met Tyr Ser
171                    750                 755                 760
172    aac gag gag gca ggc agc ggc ggc agc gtg ggc atc atc ttt aag aac    2535
173    Asn Glu Glu Ala Gly Ser Gly Gly Ser Val Gly Ile Ile Phe Lys Asn
174    765                 770                 775                 780
175    ggg gat gac ctc cgg cag gac atg ctg acc ctg cag atg atc cag ctc    2583
176    Gly Asp Asp Leu Arg Gln Asp Met Leu Thr Leu Gln Met Ile Gln Leu
177                    785                 790                 795
178    atg gac gtc ctg tgg aag cag gag ggg ctg gac ctg agg atg acc ccc    2631
179    Met Asp Val Leu Trp Lys Gln Glu Gly Leu Asp Leu Arg Met Thr Pro
180                    800                 805                 810
181    tat ggc tgc ctc ccc acc ggg gac cgc aca ggc ctc att gag gtg gta    2679
182    Tyr Gly Cys Leu Pro Thr Gly Asp Arg Thr Gly Leu Ile Glu Val Val
183                    815                 820                 825
184    ctc cgt tca gac acc atc gcc aac atc caa ctc aac aag agc aac atg    2727
185    Leu Arg Ser Asp Thr Ile Ala Asn Ile Gln Leu Asn Lys Ser Asn Met
186                    830                 835                 840
187    gca gcc aca gcc gcc ttc aac aag gat gcc ctg ctc aac tgg ctg aag    2775
188    Ala Ala Thr Ala Ala Phe Asn Lys Asp Ala Leu Leu Asn Trp Leu Lys
189    845                 850                 855                 860
190    tcc aag aac ccg ggg gag gcc ctg gat cga gcc att gag gag ttc acc    2823
191    Ser Lys Asn Pro Gly Glu Ala Leu Asp Arg Ala Ile Glu Glu Phe Thr
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192                        865              870                 875
193     ctc tcc tgt gct ggc tat tgt gtg gcc aca tat gtg ctg ggc att ggc     2871
194     Leu Ser Cys Ala Gly Tyr Cys Val Ala Thr Tyr Val Leu Gly Ile Gly
195                  880              885              890
196     gat cgg cac agc gac aac atc atg atc cga gag agt ggg cag ctg ttc     2919
197     Asp Arg His Ser Asp Asn Ile Met Ile Arg Glu Ser Gly Gln Leu Phe
198              895              900              905
199     cac att gat ttt ggc cac ttt ctg ggg aat ttc aag acc aag ttt gga     2967
200     His Ile Asp Phe Gly His Phe Leu Gly Asn Phe Lys Thr Lys Phe Gly
201          910              915              920
202     atc aac cgc gag cgt gtc cca ttc atc ctc acc tat gac ttt gtc cat     3015
203     Ile Asn Arg Glu Arg Val Pro Phe Ile Leu Thr Tyr Asp Phe Val His
204     925              930              935              940
205     gtg att cag cag ggg aag act aat aat agt gag aaa ttt gaa cgg ttc     3063
206     Val Ile Gln Gln Gly Lys Thr Asn Asn Ser Glu Lys Phe Glu Arg Phe
207                  945              950              955
208     cgg ggc tac tgt gaa agg gcc tac acc atc ctg cgg cgc cac ggg ctt     3111
209     Arg Gly Tyr Cys Glu Arg Ala Tyr Thr Ile Leu Arg Arg His Gly Leu
210                  960              965              970
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213              975              980              985
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215     Leu Ser Cys Ser Lys Asp Ile Gln Tyr Leu Lys Asp  Ser Leu Ala Leu
216          990              995              1000
217     ggg  aaa aca gag gag gag  gca ctg aag cac ttc  cga gtg aag ttt     3252
218     Gly  Lys Thr Glu Glu Glu  Ala Leu Lys His Phe  Arg Val Lys Phe
219     1005              1010              1015
220     aac  gaa gcc ctc cgt gag  agc tgg aaa acc aaa  gtg aac tgg ctg     3297
221     Asn  Glu Ala Leu Arg Glu  Ser Trp Lys Thr Lys  Val Asn Trp Leu
222     1020              1025              1030
223     gcc  cac aac gtg tcc aaa  gac aac agg cag tagtggctcc tcccagccct     3347
224     Ala  His Asn Val Ser Lys  Asp Asn Arg Gln
225     1035              1040
226     gggcccaaga ggaggcggct gcgggtcgtg gggaccaagc acattggtcc taaaggggct     3407
227     gaagagcctg aactgcacct aacgggaaag aaccgacatg gctgcctttt gtttacactg     3467
228     gttatttatt tatgacttga aatagtttaa ggagctaaac agccataaac ggaaacgcct     3527
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